

Case Studies

Alyssa Erickson

Imagine your childhood neighborhood. Retrace the steps that you would take each day to play outside, visit friends, or simply explore. Perhaps there are many experiences that you dwell on, such as the place where you crashed your bike, the smell of cookies at your neighbor's house, or the distance you ran when you raced your friends around the block. If you were to write a short story, in order to provide enough depth you would likely need to focus on just one aspect of your childhood experience in that neighborhood. Wilson (1996) remarks that an environment as rich as this has varying dimensions such as constancy and change, simplicity and complexity; you knew your way around in the neighborhood, but there was always more to find. The same is true for case studies in educational research. Case studies are a qualitative research method that focus on one unit of study (Merriam, 1998). This chapter seeks to clearly define case studies, explore their weaknesses and strengths, and discuss when and for what research questions they are most appropriate to use as an educational research method.

Defining a Case Study

In the book *The Art of Case Studies*, Robert E. Stake (1995) defines case study as “the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances” (p. xi). Like other qualitative research methods, case studies provide a holistic view of their context. Case studies use a variety of qualitative research methods, such as observations and interviews, to provide rich detail. This rich detail makes case studies a useful tool for instruction and discussion in many subjects, such as business, law, and the social sciences, which includes education. Just like the example of your childhood neighborhood, case studies look closely at a slice of life.

Types of Case Studies

According to Merriam (1998), the types of case studies in educational research can be separated into four main categories: (1) ethnographic, (2) historical, (3) psychological and (4) sociological. In short, ethnographic case studies focus on how people behave in cultural settings, such as the culture within a classroom. Historical case studies use a variety of evidences to understand a context over time, such as the founding and development of a private school. Psychological case studies, such as studies by Piaget on his own children, look at individuals and analyze their behavior. Sociological case studies focus on social constructs and use demographics to analyze the case, such as socioeconomic differences

within a school (Merriam, 1998).

Importance of Boundaries

In her widely-cited book *Qualitative Research and Case Study Applications in Education*, Sharan B. Merriam (1998) remarks that “the most single defining characteristic of case study research lies in delimiting the object of study, the case” (p. 27). Boundaries require researchers to scope their study. Researchers choose a bounded context which can contain a person, an organization, a class, a policy, or any given unit of study. Boundaries also help a researcher to define what will not be included in the study. If a researcher cannot state a limit to the number of participants or the amount of time their research requires, then it does not qualify as a case study (Merriam, 1998). Continuing with the example of your childhood neighborhood, you would need to decide what phenomenon in the neighborhood to focus on. If you chose to study the types of interactive play that occur in the neighborhood park, you would need to specify a length of time for the study and limit your observations to only what occurs in the boundaries of the park.

Weaknesses of Case Studies

Many critiques of case studies align with critiques of qualitative research methods in general. These include the time-consuming nature of data collection and analysis, the increased risk of researcher bias, and the lack of generalizability that could influence credibility (Johnson & Onwuegbuzie, 2004). As mentioned previously, case studies use a variety of qualitative research techniques, which often require a researcher to spend large amounts of time collecting data, finding the appropriate way to code and organize data, and analyzing the data to make sound conclusions. Some critics remark that qualitative research methods are more susceptible to data cherry-picking, when a researcher only presents evidence that matches their own position. Some are concerned that qualitative research is more susceptible to a researcher’s assumptions and biases. Frequently, policy-makers, administrators, and other leaders look to quantitative data for decision-making and view qualitative data as being too specific to just one context. This is perhaps the weakness that is most relevant to case studies.

Due to the boundaries that define a case study, the sample size for research is often small. Over-simplification and exaggeration can mislead a reader to think that a case study represents a greater part of the whole than is true (Merriam, 1998). Research with a smaller scope and sample size cannot find patterns across a wide sampling of cases, making it less generalizable. Data from a small sampling of participants may be dismissed as an outlier or as being unique to that specific group (Johnson & Onwuegbuzie, 2004). In contrast, quantitative data uses inferential statistics to find patterns and generalizable cases, which often speak to decision-makers because they appear to be more applicable to their own situation.

Strengths of Case Studies

Despite the common critiques of case studies outlined previously, the rich and holistic detail provided by case study has many advantages for researchers and other stakeholders. Complexities of a phenomenon within one case or context should be analyzed in depth, which requires time to observe, describe, and analyze. Other research methods would not provide this depth and detail, because they have a larger scope, which may limit them to collect more superficial data. Provided that a researcher is using appropriate techniques to collect and analyze data, the time is well spent to understand the context, because the resulting detail increases usefulness and transferability. Additionally, proper qualitative research always uses multiple methods to establish trustworthiness that acknowledges and reduces bias in a study, such as member checking or triangulation from multiple data sources. Like other qualitative methods, case studies are responsive to changes during the course of study and to the needs of the stakeholders (Johnson & Onwuegbuzie, 2004). This is especially true in case study, because the researcher is often immersed in the context, giving them a greater understanding of how to adapt. Additionally, case studies are frequently used to improve their own context, such as an evaluation of an educational program.

Case studies are not only valuable to the stakeholders within its bounded context; their rich detail makes them transferable to other contexts. Sometimes the generalizable knowledge produced from quantitative research is so broad and abstract that it is not useful to specific contexts (Johnson & Onwuegbuzie, 2004). Qualitative research as a whole does not seek to be generalizable; its value lies in its transferability. Generalizable research aims to apply its findings to the population at large, whereas transferable research must be applied by the reader as they make connections between the research and their own experiences. Transferability to other contexts can come from descriptions of decisions, structures, findings, and other principles found in the case. A reader may see connections to their own context that inform their thinking or decision-making. Perhaps they decide to avoid a course of action, because the case study showed that it did not work for one context, or they see how they can adapt their approach based on positive results in the case study. Rich detail is necessary for this kind of transferability.

Cross-Case Analysis

Also called collective, multicase, or comparative case studies, a cross-case analysis looks for similarities and differences between multiple case studies (Merriam 1998). Although a standard case study may have subunits, such as multiple students in a classroom, a cross-case analysis generally takes on a larger scope, such as multiple classrooms or multiple schools. A compelling cross-case analysis includes more cases and greater variety between the cases. Cross-case analysis requires rigorous comparison and interpretation, which strengthens the preciseness and stability of the research (Merriam 1998). The external validity, or generalizability, increases when patterns are found across cases because the

sample size increases and the case results either confirm or negate each other. Thus, a researcher may choose to conduct a cross-case analysis if they plan to select and research multiple cases. Though the goal of the cross-case analysis is still transferability, this will increase the generalizability of the research results.

When to Use Case Studies

With the strengths and weaknesses of case studies in mind, I will now discuss when it is most appropriate to use case study as a qualitative research method in education. Recall that the most defining characteristic of a case study is its boundaries. It follows that a researcher should use case study as their research method when it is feasible and advantageous to set clear limits around their research. A case study is a method that suits many beginning researchers, because the scale is small and the context is focused. However, case studies should not be overly simplistic nor a mere description of what happens; like any research in education, they should be a worthwhile addition to the current literature (Rowley, 2002). This requires the researcher to know what is currently in the literature regarding the topic and where stronger evidence is needed or gaps in knowledge exist.

A research question should not be altered to fit a chosen research method; rather, a research method such as case study should be based on the research question. Case studies are particularly useful as preliminary research that provides a fresh perspective and sets the stage for future, related research. However, case studies can stand alone by rigorously describing and explaining a phenomenon (Rowley, 2002). Case studies answer “how” and “why” research questions with a high degree of detail. More specifically, case studies fit well when “a how or why question is being asked about a contemporary set of events over which the investigator has little or no control” (Yin, 1994, p. 9). For example, in my current case study research the questions I seek to answer have to do with how an organization has adopted a specific instructional design method to their context, why they have adopted it to that degree, and how that method has influenced the perceived quality of courses, the speed at which they are produced, and employee satisfaction. Note that the scope in these questions refers to only what is going on in the organization. Case study is a suitable method to answer these bounded research questions.

Conclusion

Just as it is compelling to attempt to describe one aspect of your childhood neighborhood, case studies are a valuable way of looking at the world, because they allow a researcher to set boundaries and focus on one unit of study. Although case studies are susceptible to common criticisms of qualitative research methods like small sample size, the rich detail they provide help to make them a learning tool that produces knowledge that is transferable to other contexts. Conducting a cross-case analysis would increase generalizability, because it seeks to find patterns across multiple cases. Case study should be selected for research questions that have an appropriate, bounded scope and seek to answer “how” and “why

The Students' Guide to Learning Design and Research

questions.” The fact that case studies are well-suited for beginning researchers does not diminish the importance of rigor or their value in educational research. Case studies are a useful research method in many fields, particularly education, because a holistic view within a bounded context brings about rich detail, which enhances the understanding of the researcher and reader alike.

References

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26.

Merriam, S. (1998). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass.

Rowley, J. (2002). Using case studies in research. *Management Research News*, 25(1), 16-27.

Stake, R. (1995). *The art of case study research*. Thousand Oaks, CA: Sage Publications, Inc.

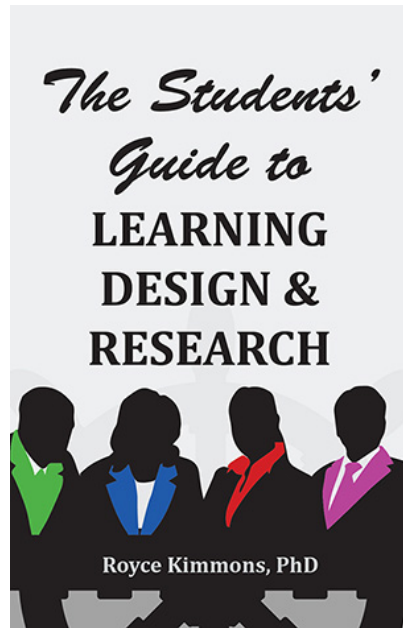
Wilson, B. G. (1996). *Constructivist learning environments: Case studies in instructional design*. Englewood Cliffs, NJ: Educational Technology Publications, Inc.

Yin, R.K. (1994). *Case study research: design and methods* (2nd ed.). Thousand Oaks, CA: Sage.

Keywords: research methods, qualitative, case study, case studies, cross-case analysis

Suggested Citation

Erickson, A. (2018). Case Studies. In R. Kimmons, *The Students' Guide to Learning Design and Research*. EdTechBooks.org. Retrieved from http://edtechbooks.org/studentguide/case_studies



Kimmons, R. (2018). *The Students' Guide to Learning Design and Research*. EdTech Books. Retrieved from <http://edtechbooks.org/studentguide>



CC BY: This book is released under a CC BY license, which means that you are free to do with it as you please as long as you properly attribute it.